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ABSTRACT

This research report describes a follow-up study of children from a large urban school district that had widely implemented a pre-kindergarten program. The study examined the critical transition between primary and upper elementary grades for enduring effects of early educational experiences. A sample of 141 children enrolled in 68 urban schools was studied at the end of children's sixth year in school. Of this sample, 96% were African-American, 57% were female, and 76% were from low socioeconomic backgrounds. Results showed that some preschool school learning experiences impact negatively on children's ability to make the transition successfully from the primary grades to the upper grades. The children whose preschool experience was academically focused showed the greatest decline in school achievement between first and fourth grades. The long-term positive effects of a more active, child-initiated early learning experience showed up clearly between the fifth and sixth year of school for inner city children who began school at age four. (Tables of the impact of prekindergarten/Head start model on progress, by grades, are included.) (WP)

Differential Effects of Preschool Models on Inner-City Children: The 'Class of 2000' Transitions from Third to Fourth Grade

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Abstract

School competence and student achievement of 141 (M age = 120 mos.) previously studied children were examined for enduring effects of differential early educational experiences. The sample was 96% African American, 57% female, and 76% low SES. At follow-up, consistent model x year interactions were found. Negative effects of didactic, academically-directed preschool showed up in reduced student achievement 6 years later, along with difficulty in making the transition to increased expectations of the upper elementary grades. Long-term positive effects of active, child-initiated early learning experiences were clearly evident in this transition.

Differential Effects of Preschool Models on Inner-City Children: The 'Class of 2000' Transitions from Third to Fourth Grade

Although research supports the benefits of quality early education programs for children from low-income families (e.g., Lazar, Darlington, Murray, Royce, & Snipper, 1982), not all curriculum models currently in use would be considered developmentally appropriate and some experts (e.g., Elkind, 1986; Zigler, 1986) fear inappropriate methods may be detrimental to future learning motivation. Furthermore, longitudinal studies (i.e., Miller & Bizzell, 1984; Schweinhart, Barnes, & Weikart, 1993; Schweinhart, Weikart, & Larner, 1986) have found preschool didactic models to have long-term negative effects on adolescent social behavior and school achievement. It can no longer be assumed that any preschool curriculum will achieve positive results, and research efforts to find more effective matches between curriculum and child characteristics are needed (Powell, 1987).

The present research was a follow-up study of children from a large urban school district that had widely implemented public pre-kindergarten. Based upon this study's earlier findings of differential program effects on development and early skills acquisition in three cohorts of 4-year-olds (Marcon, 1992; 1993), policy makers have noticeably reformed preschool programs to reflect more developmentally appropriate practices. This paper examines the critical transition between primary and upper elementary grades for enduring effects of early educational experiences. For many children the transition from third to

fourth grade is cognitively difficult because of increased expectations for independent thought and mastery of more difficult skills and ideas. The transition can also be socially difficult as expectations for student maturity are increased.

Method

Sample

A sample of 141 children (M age = 119.7 mos.) enrolled in 68 urban schools was studied at the end of children's sixth year in school (all had attended both Pre-K/Head Start and kindergarten prior to first grade entry). The sample was 96% African American and 57% female. Most children (76%) qualified for subsidized lunch based upon low family income and 72% lived in single parent homes. Since first studied, 42% had moved to another school, one-third had been retained, and 7% had received special education services.

Recovery rate was 67% of the original sample, with 70% and 86% of children studied as first and third graders being recovered respectively. The sample recovered since first grade had more African American children ($p < .05$) who were more likely to live in single parent families ($p = .06$). These differences were consistent with district-wide changes in enrollment patterns following kindergarten. Demographically, the recovered first and third grade samples did not differ. Nor did either sample differ significantly from the original in terms of sex, age, parent involvement, or grades earned in Pre-K, K, 1st, or 3rd grade. Recovery rate was comparable for each of the three preschool models studied.

Preschool Models

Three different Pre-K models were previously identified using cluster analysis of a survey measuring teacher beliefs and practices (Marcon, 1988). Model CI teachers represented an active, child-initiated approach to early learning; Model AD teachers ran more didactic, academically-directed programs with direct teacher instruction; and Model M teachers fell in-between the other two opposing models and endorsed more middle-of-the-road beliefs and practices.

Procedure

Measures of student achievement (i.e., report cards, retention, special education placements) were collected and analyzed for effects of preschool model using repeated measures ANCOVA. A covariate (eligibility for subsidized lunch) was used to control for possible economic differences between children.

Results

School Competence

No significant differences attributable to preschool model were found in rates of special education placement or retention prior to third grade, after third grade, or after fourth grade.

Progress Reports

As shown in Table 1, Model CI children were more successful in making the transition from third to fourth grade. Most notable were the Preschool Model x Year interactions in which grades of Model CI children generally increased, while Model M

and Model AD grades generally decreased. Among children who had not been retained ("on schedule"), this pattern was evident for overall grade point average (GPA) as well as all subject areas except music. Similarly, comparisons of 'Year 5' to 'Year 6' grades of all children (including those retained prior to third grade) revealed the same pattern for GPA and all subject areas except handwriting and social studies.

Insert Table 1 about here

Comparisons of children's academic progress since first grade are found in Table 2. While all grades were typically lower by fourth grade ('Year 6'), the drop in performance was especially disconcerting for Model AD children. Among "on schedule" children, GPA dropped 22% for Model AD children compared to only 5% and 6% for Models CI and M respectively. By fourth grade, Model AD grades had decreased 36% in math, 32% in reading and language, 30% in spelling and social studies, 23% in science, and 16% in health/PE. A similar pattern was found from first grade to 'Year 6' for all children, with an 18% drop in GPA for Model AD compared to 1% and 5% drops for Models CI and M respectively.

Insert Table 2 about here

Discussion

Overly academic early learning experiences impact negatively on children's ability to successfully transition from the primary grades to increased expectations of the upper elementary grades. Furthermore, children whose first school experience is a didactic, academically focused preschool show the greatest decline in school achievement between first and fourth grades. The long-term positive effects of a more active, child-initiated early learning experience show up clearly between the fifth and sixth year of school for inner-city children who begin school at age four. The current study continues to provide policy makers with the type of data needed to distinguish between curriculum options for young children.

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Table 1

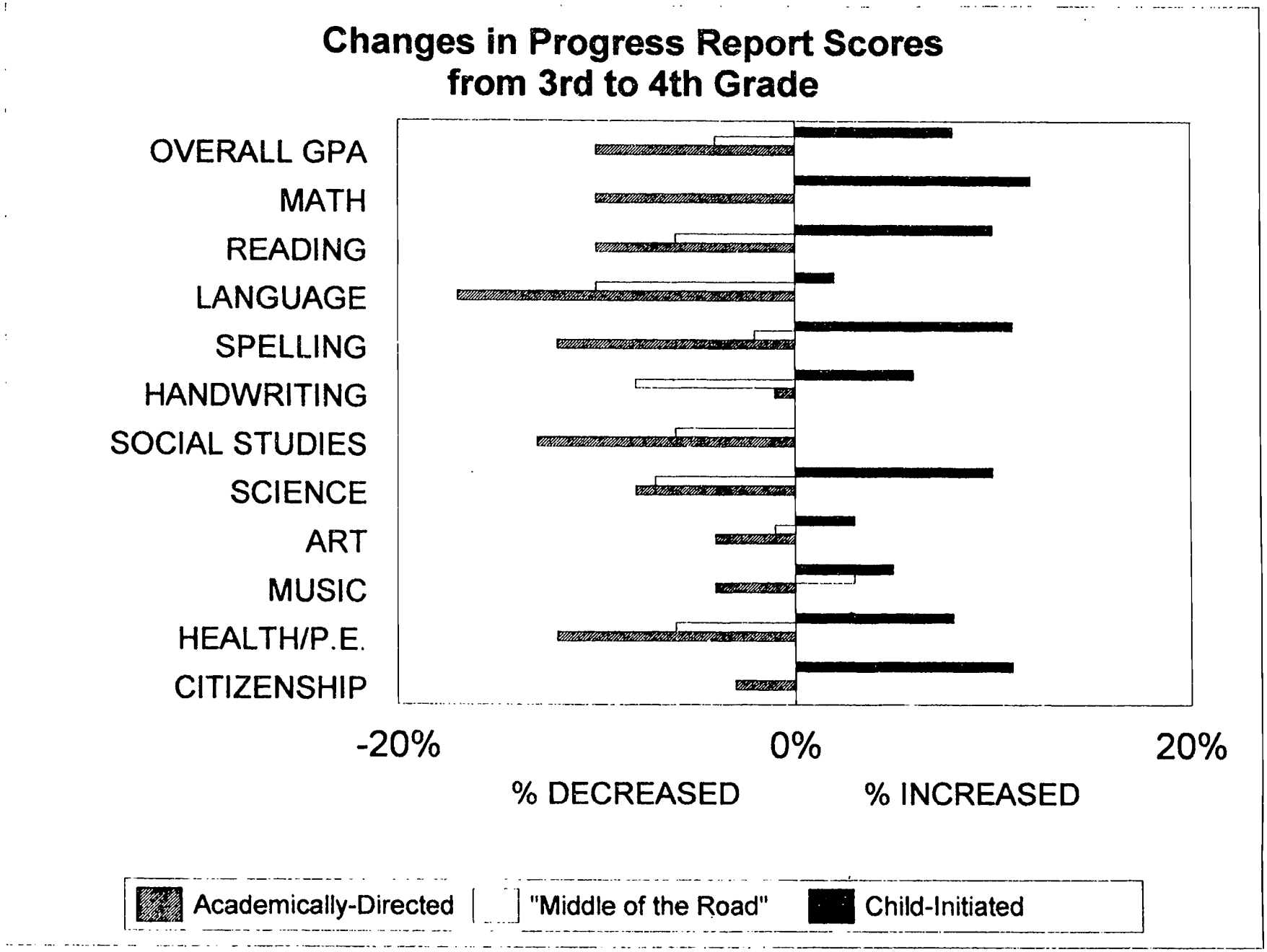
Impact of Pre-K/Head Start Model on Transition from 3rd Grade to 4th Grade

	"On Schedule" Children				All Children ('Year 5' to 'Year 6')			
	CI	M	AD	ANCOVA (Model x Year)	CI	M	AD	ANCOVA (Model x Year)
Overall G P A								
3rd grade	2.74	2.90	2.60	F (2,102) = 5 09, p < .01	2.50	2.63	2.42	F (2,135) = 4.97, p < .01
4th grade	2.95	2.78	2.35		2.69	2.49	2.26	
Subareas								
Math								
3rd grade	2.42	2.60	2.22	F (2,101) = 2.11, p = .12	2.07	2.28	2.02	F (2,133) = 3.45, p < .05
4th grade	2.71	2.60	2.00		2.50	2.26	1.91	
Reading								
3rd grade	2 52	2.73	2.40	F (2,101) = 2 35, p = .10	2 16	2.36	2.19	F (2,133) = 3.08, p < .05
4th grade	2 77	2 57	2.16		2.50	2.24	2.00	
Language								
3rd grade	2 62	2.92	2.53	ns	2.29	2.61	2.36	F (2,134) = 2.80, p = .06
4th grade	2 56	2.62	2.11		2 38	2.31	2.05	
Spelling								
3rd grade	2 75	2.89	2.69	F (2,101) = 3 19, p < 05	2.38	2.59	2.45	F (2,134) = 2.25, p = .10
4th grade	3 06	2.84	2.36		2 67	2.49	2.29	
Handwriting								
3rd grade	2 75	2 84	2 56	ns	2 62	2.55	2.36	ns
4th grade	2 91	2 62	2.53		2 73	2.39	2.40	
Social Studies								
3rd grade	2 64	3 00	2 50	ns	2 49	2 67	2.31	ns
4th grade	2.64	2.81	2.17		2 46	2.51	2.12	
Science								
3rd grade	2 68	3 03	2.56	F (2,99) = 2 78, p = 06	2 54	2.76	2.36	ns
4th grade	2 94	2.81	2.36		2 67	2.59	2.26	
Art								
3rd grade	3 12	2 93	2 81	ns	3 03	2.74	2.75	ns
4th grade	3 23	2 90	2.71		3 05	2.67	2.58	
Music								
3rd grade	3 00	2 93	2 93	ns	2 82	2 76	2.77	ns
4th grade	3 14	3 03	2 82		2 88	2.76	2.71	
Health/P I								
3rd grade	3 23	3 22	2 88	F (2,86) = 3 44, p < 05	2 97	3 02	2.74	F (2,115) = 3 86, p < 05
4th grade	3 50	3 03	2 53		3 25	2 84	2 47	
Citizenship								
3rd grade	2 83	3 06	2 50	ns	2 50	2 72	2 26	F (2,114) = 2 28, p = 10
4th grade	3 13	3 06	2 42		2 75	2 53	2 29	

Table .

Impact of Pre-K/Head Start Model on Progress from 1st Grade to 4th Grade

	"On Schedule" Children				All Children (1st Grade to 'Year 6')			
	CI	M	AD	ANCOVA (Model x Year)	CI	M	AD	ANCOVA (Model x Year)
Overall G.P.A.								
1st grade	2.97	3.00	3.01	$F(2,90) = 7.42$, $p < .001$	2.68	2.63	2.76	$F(2,123) = ' 2$, $p < .01$
4th grade	2.83	2.82	2.34		2.65	2.49	2.25	
Subareas								
Math								
1st grade	2.87	3.18	3.03	$F(2,86) = 5.19$, $p < .01$	2.35	2.62	2.60	$F(2,118) = 3.73$, $p < .05$
4th grade	2.55	2.68	1.94		2.33	2.28	1.85	
Reading								
1st grade	2.83	3.00	3.16	$F(2,85) = 6.17$, $p < .01$	2.21	2.41	2.74	$F(2,116) = 6.04$, $p < .01$
4th grade	2.60	2.61	2.13		2.40	2.18	2.00	
Language								
1st grade	2.85	3.00	3.03	$F(2,88) = 4.06$, $p < .05$	2.49	2.56	2.68	$F(2,120) = 2.84$, $p = .06$
4th grade	2.52	2.59	2.07		2.33	2.22	2.00	
Spelling								
1st grade	3.09	3.00	3.23	$F(2,86) = 5.30$, $p < .01$	2.60	2.40	2.81	$F(2,116) = 3.33$, $p < .05$
4th grade	3.00	2.89	2.27		2.69	2.32	2.19	
Handwriting								
1st grade	2.94	2.90	2.74	ns	2.62	2.58	2.42	ns
4th grade	2.85	2.66	2.55		2.60	2.39	2.38	
Social Studies								
1st grade	3.06	3.00	3.00	$F(2,88) = 4.15$, $p < .01$	2.81	2.68	2.80	$F(2,119) = 3.35$, $p < .05$
4th grade	2.59	2.90	2.10		2.47	2.56	2.05	
Science								
1st grade	3.12	3.00	3.06	$F(2,87) = 3.43$, $p < .05$	2.84	2.70	2.82	$F(2,118) = 2.90$, $p < .05$
4th grade	2.88	2.89	2.36		2.65	2.68	2.26	
Art								
1st grade	2.97	2.79	3.12	ns	2.97	2.65	2.97	ns
4th grade	3.03	2.83	2.83		3.00	2.71	2.78	
Music								
1st grade	2.96	3.04	3.00	ns	2.86	2.91	2.97	ns
4th grade	2.85	3.04	2.74		2.77	2.71	2.74	
Health/P.E.								
1st grade	3.19	3.00	3.10	$F(2,76) = 6.56$, $p < .01$	3.17	2.84	2.97	$F(2,105) = 4.13$, $p < .01$
4th grade	3.38	3.04	2.59		3.17	2.89	2.50	
Citizenship								
1st grade	3.03	2.88	2.54	ns	2.82	2.51	2.29	ns
4th grade	2.87	3.32	2.50		2.74	2.65	2.26	



Source: District of Columbia Public Schools